CUSTOM CHROME® Instructions

RevTech® 5-Speed Transmission Assembly Check List

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☐ 58301X Polish 4/5 Speed 2.94 Ratio
☐ 58302X Black/Chrome Softail 2.94 Ratio
☐ 58303X Black/Chrome FXR 2.94 Ratio
☐ 58305X Polish/Chrome Softail 2.94 Ratio
☐ 58306X Polish/Chrome FXR 2.94 Ratio
☐ 58307X Black/Chrome Dyna 2.94 Ratio
☐ 58308X Polish/Chrome Dyna 2.94 Ratio
☐ 58309X Black/Chrome FLT 2.94 Ratio
☐ 58310X Polish/Chrome FLT 2.94 Ratio
☐ 58314X Polish/Chrome Dyna 3.24 Ratio
☐ 58315X Black/Chrome Dyna 3.24 Ratio
☐ 58316X Polish/Chrome FLT 3.24 Ratio
☐ 58317X Black/Chrome FLT 3.24 Ratio
☐ 58334X Polish/Chrome Softail 3.24 Ratio
☐ 58335X Black/Chrome Softail 3.24 Ratio
☐ 58351X Glossy Black Softail 3.24 Ratio

TRANSMISSION SERIAL # 5 82953674

1. STUD TRANSMISSION CASE (IF NECESSARY).
2. INSTALL COUNTER SHAFT NEEDLE BEARING.
3. BALL BEARING MAIN DRIVE GEAR AND RETAINER CLIP. (NOTE: RETAINER CLIP DIRECTION, BEVEL FACING OUT).
4. INSTALL TRANSMISSION OIL SEAL-MAIN SHAFT LEVER SEAL.
5. INSTALL SHIFT LEVER ASSEMBLY PREVIOUSLY ASSEMBLED.
6. INSTALL ADJUSTING SCREW SHIFT ARM TO DESIRED DEPTH WITH LOCK NUT (FINGER TIGHT).
7. INSTALL FIFTH GEAR AND QUAD SEAL, SPACER.
8. **A)** INSTALL BALL BEARING IN SIDE DOOR WITH RETAINING CLIPS BEVELED SIDE FACING OUT IF APPLICABLE.
   B) INSTALL COUNTER AND MAIN SHAFT WITH INNER SPACERS. (NOTE: SHOULDERED SPACER GOES ON MAINSHAFT. PLACE OUTER SPACERS AND NYLOCK ON THE TWO SHAFTS. TIGHTEN TO 45 - 55 FT. LBS.
   C) INSTALL ALL GEARS, BEARINGS, WASHERS AND SNAP RINGS ON COUNTER SHAFT AND MAINSHAFT.
9. INSTALL SIDE DOOR ASSEMBLY INTO CASE WITH GASKET.
10. INSTALL 5/16 INCH SIDE BOLTS TIGHTEN TO 13-16 FT. LBS., 1/4 INCH SIDE BOLTS TIGHTEN TO 7-9 FT. LBS.
11. PLACE SHIFT FORKS AND SHAFT IN CASE. INSERT LEFT PLUG UNTIL SHIFT FORK ROD IS FLUSH WITH RIGHT SIDE OF CASE.
12. **A)** SHIFT DRUM ASSEMBLY. PLACE SHIFT DRUM RIGHT SUPPORT AND PLACE OUTER SHIM AND SNAP RING ON OUTSIDE OF SUPPORT BLOCK. END PLAY MUST BE .001" TO .004".
    B) PLACE LEFT SUPPORT ON SHIFT DRUM. INSTALL SHIFT DRUM AND SUPPORTS ON TRANSMISSION CASE WITH WASHER AND BOLTS. TORQUE TO 7 TO 9 FT. LBS.
13. PLACE THROW OUT BEARING IN RIGHT END OF MAINSHAFT, SIDE COVER GASKET AND OUTER SIDE COVER ON TRANSMISSION CASE SIDE DOOR. INSTALL OUTER SIDE COVER HARDWARE SNUG. (NOTE: HARDWARE WILL HAVE TO BE REMOVED AT LATER DATE TO INSTALL CLUTCH CABLE.)
14. INSTALL PRIMARY BEARING INNER RACE ON MAINSHAFT. (NOTE: LEAVE .100" GAP BETWEEN INNER AND FIFTH GEAR).
15. INSTALL TOP COVER AND HARDWARE. TIGHTEN TOP BOLTS TO 7-9 FT. LBS. OF TORQUE.
16. PLACE SPROCKET AND SPROCKET NUT ON FIFTH GEAR. TORQUE NUT TO 110-120 FT. LBS. THEN TIGHTEN NUT AN ADDITIONAL 30° TO 40° TURN. PLACE LOCK PLATE OVER NUT AND SECURE WITH THE TWO LOCK PLATE SCREWS USING RED LOCKTITE. TORQUE SCREWS TO 50-60 IN. LBS.
17. ATTACH CCI WARRANTY STICKER ON BOTTOM OF TRANSMISSION CASE AND TRAP DOOR.
    WARRANTY VOID IF SEAL IS BROKEN.

NOTE: TO PROTECT THE WARRANTY PLEASE SEND IN WARRANTY CARD WITH IN 30 DAYS OF PURCHASE.

16100 Jacqueline Court, Morgan Hill, CA 95037-5598

CCI # 58-302Xi
Revised 1/19/99

CUSTOM CHROME® Instructions

RevTech™ 4/5 Speed Transmission For FXE, FXWG and FL Models CCI #58-301

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BILL OF MATERIAL

NO.	QTY.	DESCRIPTION	PART NO.
1	1	TRANSMISSION ASSEMBLY	58-301
2	5	3/8" SPIRAL LOCK WASHER	93-614
3	5	3/8"-24 UNF HEX NUT	25-184
4	5	5/16" SAE FLAT WASHER	25-177
5	6	5/16" SNAP CAPS	32-532
6	5	5/16" SPIRAL LOCK WASHER	25-174
7	2	5/16"-18x1-1/2" HEX SOCKETHEAD SCREW	32-117
8	2	5/16"-18x1-1/4" HEX SOCKETHEAD SCREW	32-116
9	3	5/16"-24 UNF HEX NUT	25-183
10	1	CLUTCH CABLE EXTENSION 4/5-SPEED TRANS.	93-610
11	1	SHIFT LINKAGE ROD 5/16"-24x10-1/2" LONG	19-318

BILL OF MATERIAL

NO.	QTY.	DESCRIPTION	PART NO.
12	5	SPACER WASHER .375"x.8"x.188"	93-616
13	5	SPACER .312"x.62"x.455"	93-608
14	2	SPACER .312"x.62"x.580"	93-617
15	2	SPACER .312"x.62"x.770"	93-609
16	3	STUD 5/16"-24 UNF TO 5/16"-18UNC x 1-3/4" LONG	93-613
17	2	CHROME ROD END	19-299
18	1	BUTTON HEAD BOLT 5/16"-24x1" CHR. (10 PACK)	32-322
19	1	NYLOCK NUT 5/16"-24 CHR. (10 PACK)	14-626
20	1	FL/FXWG SHIFT ARM - SPECIAL	93-808
21	1	FXE MID SHIFT ARM - SPECIAL	93-806
22	1	5/16"-24x1" HEX HEAD BOLT	25-161
23	1	CLUTCH CABLE	13-947

IMPORTANT NOTES: Disconnect negative battery cable from the frame. There is NO OIL in this transmission. This transmission requires 20 ounces of transmission lube (CCI# 35-055). Fill with transmission lube after installation. Do not use lock nuts on bottom case studs. Use Blue Loctite (CCI # 35-007) on first three threads of all hardware before final assembly.

For relocation of a transmission speedo drive, use speedodrive kit CCI #26-737 for a 16" front wheel or CCI #26-738 for a 21" front wheel.

LEFT SIDE

1. Remove OEM inner and outer primary covers and 4-speed transmission if applicable.
2. Remove transmission mounting plate from OEM transmission and clean.
3. Loosely install the new RevTech transmission (1) to the mounting plate using .375" I.D. spacer washers (12) , 3/8" lock washers (2) and 3/8" hex nuts (3) provided. (See illustration 5, 6 or 7)
4. Bolt inner primary cover securely to transmission assembly on bench. Verify shift linkage and sprocket nut clearance. BEFORE PROCEEDING READ REFERENCE NOTES BELOW.

NOTE # 1 : Cast Aluminum Inner Primary (1970 thru 1978). On the transmission side, the four riser posts around the main shaft seal area must be machined down for sprocket nut lock screw clearance. (See illustration 1A)

NOTE # 2 : Cast Aluminum Inner Primary (1970 thru 1978). On the front side of the inner primary, the bearing seal spigot must be machined down .050" for finger spool clearance. (See illustration 2)

NOTE # 3 : OEM Die Cast Inner Primary (1979 thru 1984). This primary must be checked for clearance.

NOTE # 4 : CCI Inner Primary (CCI #28-801 and 28-063). On the transmission side, the bearing seal spigot must be machined down .085" for proper clearance. (See illustration 1B)

Illustration 1

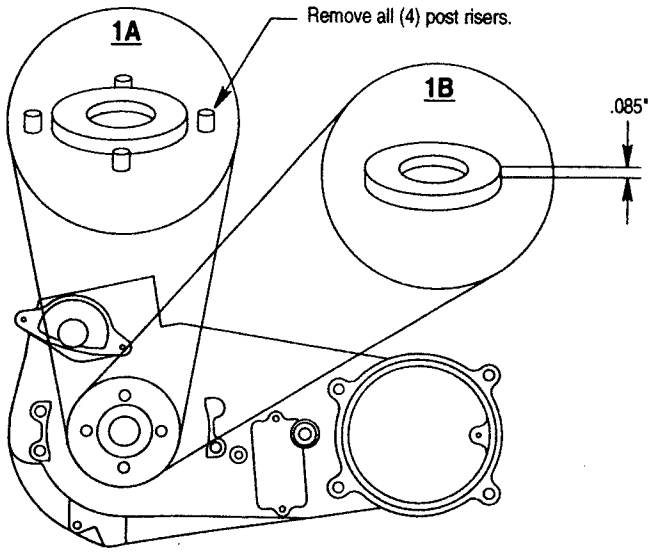
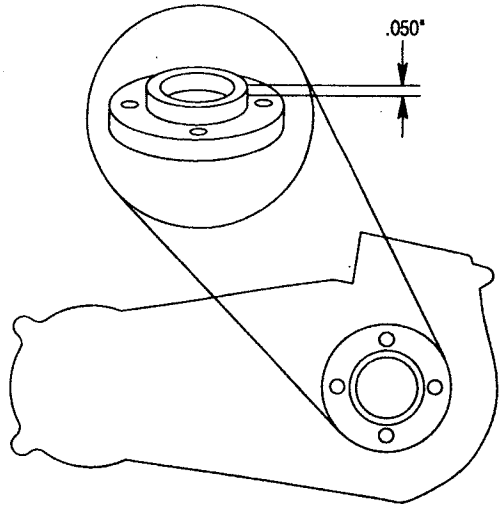


Illustration 2



16100 Jacqueline Court, Morgan Hill, CA 95037-5598

CCI # 58-301i
Revised 10/5/98

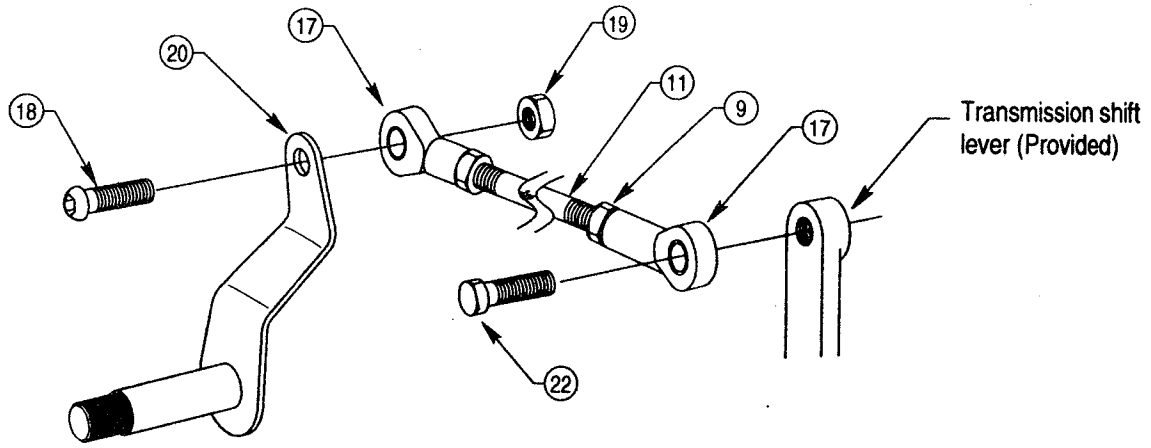
5. Remove the clutch release arm from the transmission assembly. This will allow clearance for installation. Place the transmission assembly in the motorcycle frame. Install mounting plate to frame hardware (use Loctite on first three threads). Tighten hardware to 30-33 ft. lbs. of torque.
6. Place the starter motor in position over the transmission. Place rear chain over sprocket and install master link.
7. FXWG and FL shift linkage installation. Assemble shift linkage using shift rod (11) , two chrome rod ends (17) and two 5/16"-24 chrome nuts (9) . Install *front* rod end linkage assembly onto shift arm (20) using one buttonhead bolt (18) and one nylock nut (19) . Install *rear* rod end assembly onto provided shift lever using hex bolt (22) . Tighten and secure bolts. (See illustration 3)
8. FXE Mid shift linkage installation. Using the existing rod end assembly, install *front* rod end linkage assembly onto shift arm (21) using button head bolt (18) and nylock nut (19) . Install *rear* shift linkage assembly onto provided shift lever using hex head bolt (22) . Tighten and secure bolts. (See illustration 4)
9. Install the inner primary cover as described in the OEM manual.
10. Tighten transmission to mounting plate bolts. Torque to 21-27 ft. lbs. Place .375" I.D. spacer washer (12) , 3/8" lock washer (2) and 3/8"-24 hex nut (3) on transmission to frame stud. Tighten to 21-27 ft. lbs. of torque.
11. Reinstall clutch release lever on transmission. Install clutch cable using clutch cable extender (10) .

NOTE: This transmission assembly uses a (Supplied) stock 1986 FXST standard length clutch cable. (CCI #13-947 - OEM #38607-87A)

12. Install starter housing bolt and torque to 10 ft. lbs. Install clutch, primary drive and engine sprocket as per OEM manual.
13. Install outer primary cover.
14. Adjust clutch as per OEM manual for 1979-1984 5-speeds.

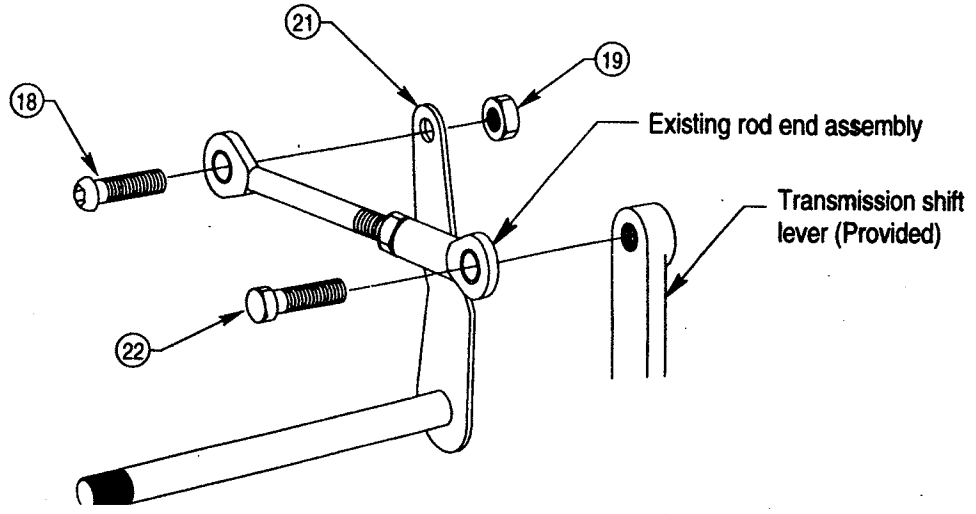
FXWG FL

Illustration 3



FXE

Illustration 4



RIGHT SIDE

15. FL - FLH Starter motor bracket and battery tray support bracket mounting procedures. Install starter support bracket onto side cover of transmission using two 5/16"-18x1-1/2" sockethead bolts (7) , two 5/16" lock washers (6) , two 5/16" flat washers (4) and two .770" long spacers (15) . Tighten to 18-20 ft. lbs. of torque. Mount starter stud to starter support bracket using OEM lock washer and OEM 1/4"-20 nut. Tighten to 9-11 ft. lbs. of torque. Install battery tray support bracket onto side of transmission using two 5/16"-18x1-1/4" socket head bolts (8) , 5/16" lock washers (6) , 5/16" flat washers (4) and two .455" spacers (13) . Tighten to 18-22 ft. lbs. of torque. Mount battery tray support bracket to battery tray using existing hardware. (See illustration 5)

NOTE: Some models may require two .580" (instead of .455") spacers to keep the support bracket parallel to the transmission side cover.

16. FXE - FXWG battery tray / starter motor bracket mounting procedures. Install bracket onto side cover of transmission using two 5/16"-18x1-1/4" socket head bolts (8) , 5/16" lock washers (6) , 5/16" flat washers (4) and two .455" spacers (13) . Tighten bolts to 18-22 ft. lbs. of torque. Install bracket onto starter stud and battery tray lord mount using OEM lock washers and OEM nuts and tighten securely. (See illustration 6 or 7)

NOTE: Some models may require two .580" (instead of .455") spacers to keep the support bracket parallel to the transmission side cover

17. FXE Brake Pedal Installation. Install three studs (16) onto side of cover using Loctite on first three threads. Place three .455" spacers (13) onto studs. Mount bracket and pedal assembly onto studs using 5/16" hex nuts (9) and 5/16" lock washers (6) , making sure the brake rod is in the master cylinder piston. The brake rod must be adjusted for free play as per OEM manual.

18. Adjust rear chain if necessary and check all current hardware for correct fit and torque.

19. Reconnect battery cable. *You are now ready to test ride.*

Illustration 5
FL - FLH

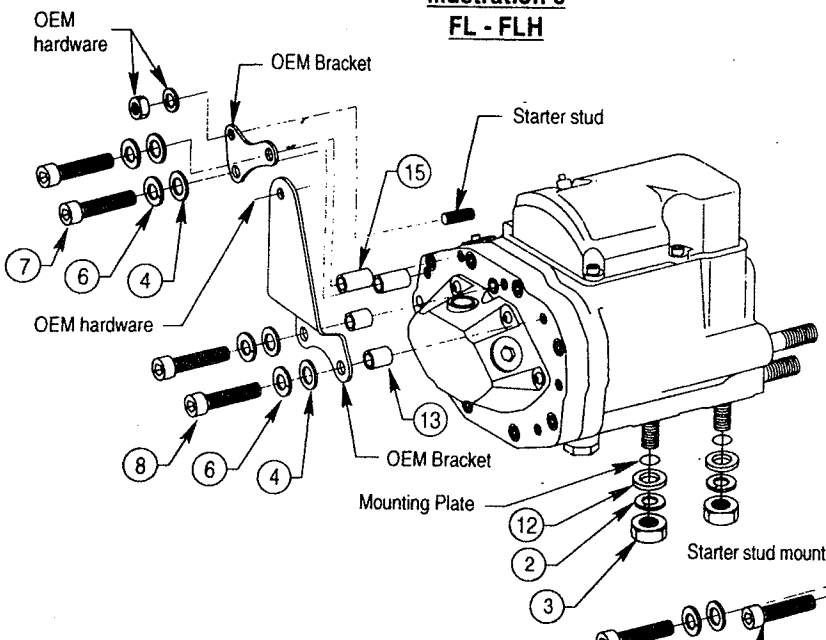


Illustration 6
FXE

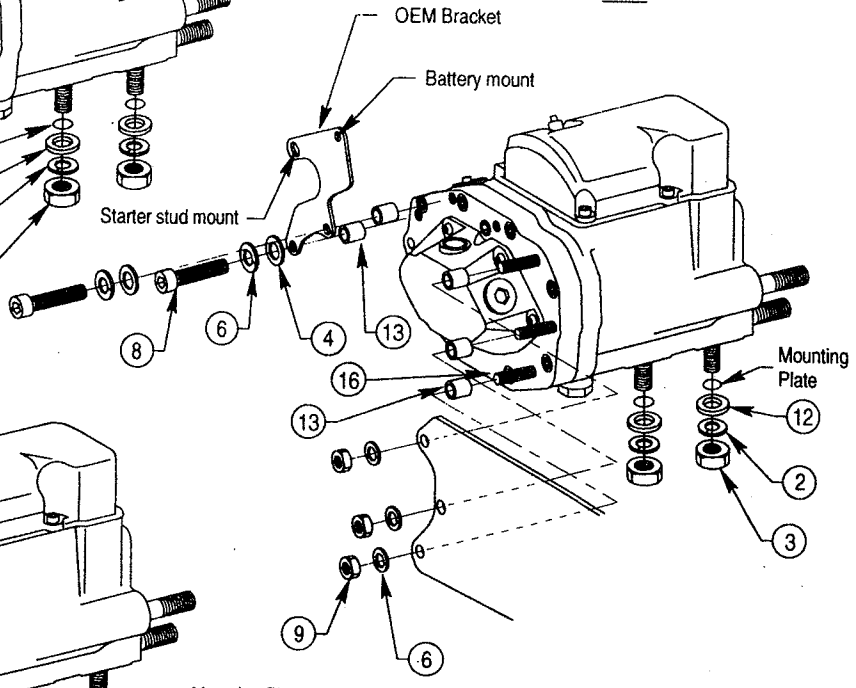
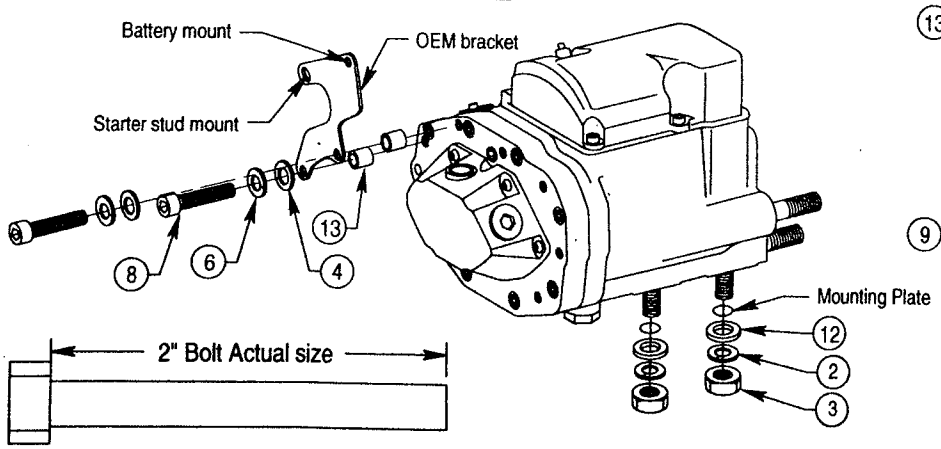
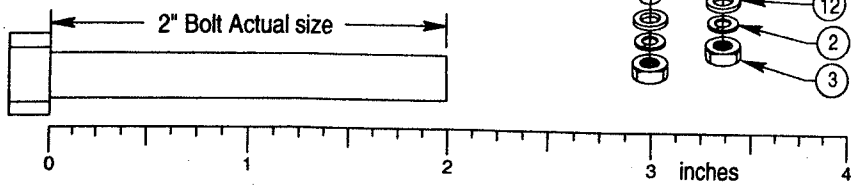


Illustration 7
FXWG





Revised 10/5/98

CUSTOM CHROME® Instructions

RevTech® Electronic Speedometer Recalibration Unit

For use with CCI RevTech 5-Speed or 6-Speed Gear Sets and Transmissions

CCI #58-318

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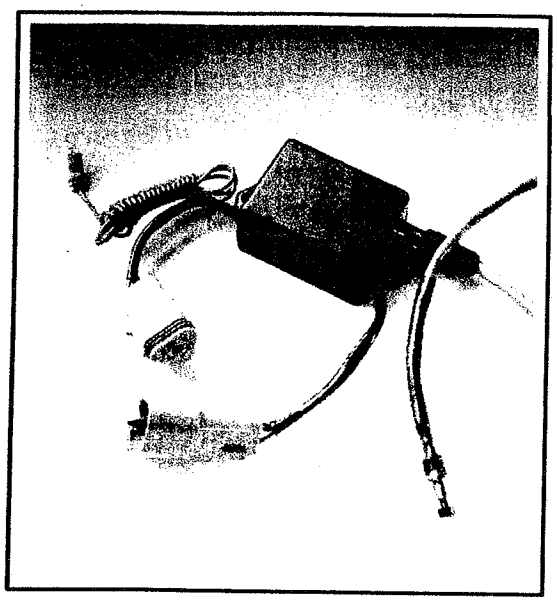

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Box Installation:

1. Disconnect the connector between the speed sender and the speedometer gauge.
2. Attach the female connector from the speed sender to the male connector from the speedometer calibrator.
3. Attach the male connector from the speedometer gauge to the female connector from the speedometer calibrator.
4. Route the red wire from the speedometer calibrator to a switched ignition source. CCI recommends connecting the red wire to the instrument circuit breakers' orange wire using the supplied scotch lock.
5. Wire tie the speedometer calibrator unit to a desired location on the motorcycle for a **permanent mount**.

Gauge Calibration:

1. Plug the push-button switch assembly into the receptacle on the speedometer calibrator unit.
2. Press in and hold the button and turn the ignition on, but DO NOT START THE ENGINE.
3. Determine what speed you would like to calibrate your speedometer at. This will be your calibration speed.
4. Hold and/or press the push-button switch (Approx. 20 sec), until the gauge reads your desired calibration speed.
5. Turn off the ignition.
6. Temporarily mount the push-button switch assembly on the bike where it would be easily accessible while riding.
7. Start the engine.
8. Pace the bike behind another moving vehicle. When your pace vehicle reaches your calibration speed, press the push-button switch.
9. Your speedometer is now calibrated.
10. When the bike is stopped, turn off the ignition. Unplug and remove the push-button switch assembly and place into a safe keeping. The push-button switch assembly is not needed for normal operation. **Do not remove the speedometer calibrator unit.**

Gauge Re-Calibration:

1. If you remember your calibration speed, follow the Gauge Calibration steps 6 thru 10.
2. If you DO NOT remember your calibration speed, follow Gauge Calibration steps 1 thru 10.

16100 Jacqueline Court, Morgan Hill, CA 95037-5598

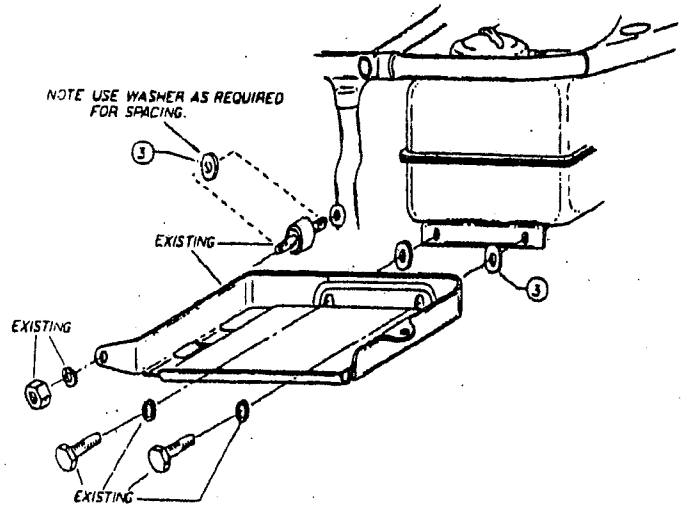
CCI #58-318i
Revised 4/14/00

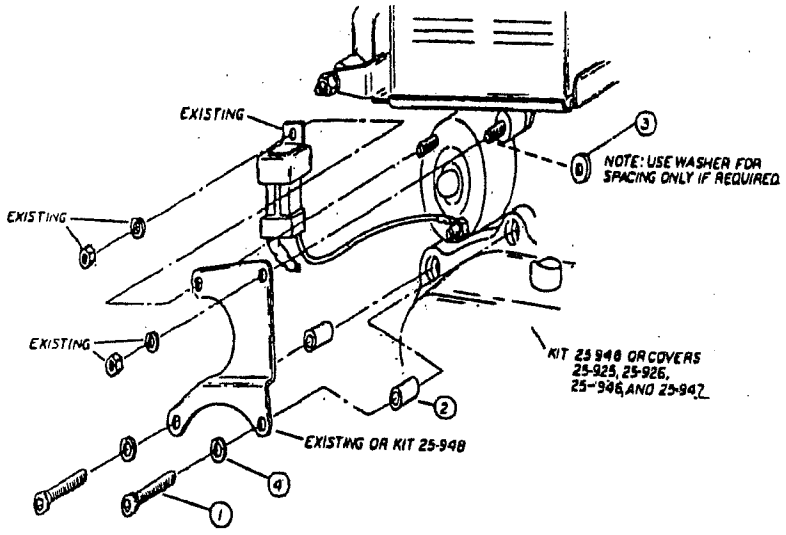
CUSTOM CHROME® Instructions

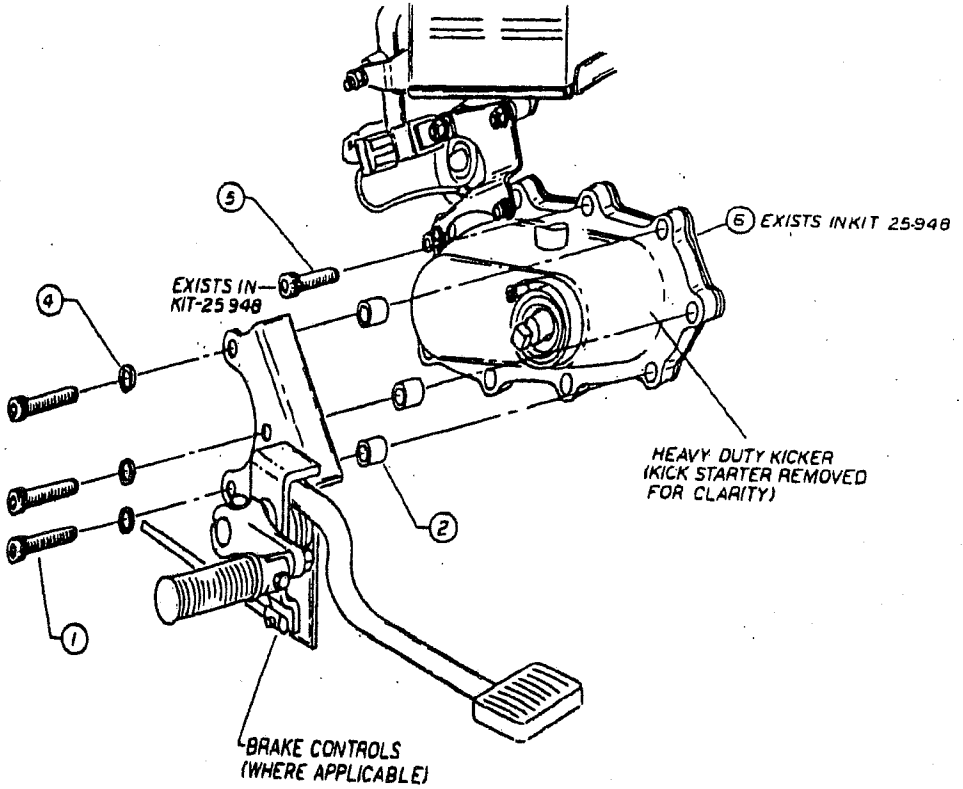
Heavy Duty Kicker Cover Spacers/Hardware Kit for use with CCI #25-948

Special spacing for battery tray and mid-mount brake controls

NO.	QTY	DESCRIPTION
1	5	5/16"-18 UNC x 1.5" Socket Head Bolt
2	5	Heavy Duty Kicker Spacer
3	4	Heavy Duty Kicker Washer
4	5	5/16" Split Lockwashers




EXISTING
EXISTING
EXISTING
NOTE: USE WASHER FOR SPACING ONLY IF REQUIRED
KIT 25-948 OR COVERS 25-925, 25-926, 25-946 AND 25-947
EXISTING OR KIT 25-948


EXISTS IN KIT 25-948
EXISTS IN KIT-25-948
HEAVY DUTY KICKER (KICK STARTER REMOVED FOR CLARITY)
BRAKE CONTROLS (WHERE APPLICABLE)

16100 Jacqueline Court, Morgan Hill, CA 95037-5598

CCI #40-404
Inst. Sheet
7/2/92

CUSTOM CHROME® Instructions

Chrome RevTech®
4/5-Speed Kick Starter Kit

For CCI #58-301 RevTech 4/5-Speed Transmissions

CCI #58-290 without 4/5-Speed Transmission

CCI #58-295 with 4/5-Speed Transmission

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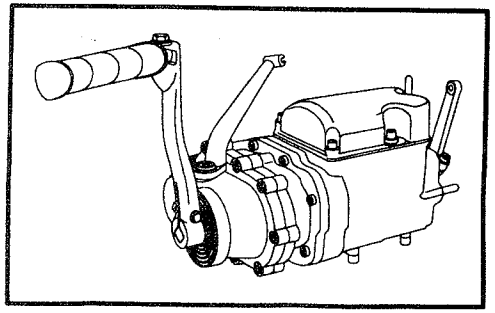

Bill Of Materials for CCI #58-290 (1 of 2)

Item #	Qty.	Description	Part #
1	1	O-Ring, Kick Starter Shaft (not shown)	12-082
2	1	Kick Pedal Assembly	12-247
3	1	Kick Pedal Spring, Chrome	12-249
4	1	Straight Kick Arm	12-446
5	1	Clutch Push Rod Bearing Kit	15-021
6	1	Kicker Shaft	15-075
7	1	Kick Pedal Pin Bolt Kit	18-432
8	1	Bushing Kit, Kicker Shaft (not shown)	19-076
9	1	Hex Bolt 3/8"-24x2.0"	25-172
10	1	Lock Washer 3/8", Chrome	25-175
11	1	Hex Nut 3/8"-24	25-184
12	1	Crank Gear, 24 Tooth	25-282
13	1	Starter Clutch	25-283
14	1	Kick Starter Gear, 16 Tooth	25-284
15	1	Bumper Plate	25-285
16	1	Nut, Crank Gear	25-287
17	1	Nut, Starter Clutch	25-288
18	1	Spring, Starter Clutch	25-291
19	1	Lock Washer, Crank Gear	25-389
20	1	Lock Washer, Starter Clutch	25-390
21	1	Gasket, Kicker Cover	25-537
22	1	Clutch Release Finger	25-928
23	1	Stud, Kicker Spring	25-980
24	1	Key, Starter Clutch Gear	25-981
25	1	Washer, Kicker Shaft	25-982
26	1	Oil Slinger, Throwout Bearing	28-050
27	1	Bearing, Trap Door, Counter Shaft	30-535
28	9	Sockethead Screw 5/16"-18x5/8"	32-112
29	4	Sockethead Screw 5/16"-18x1-1/4"	32-116
30	5	Sockethead Screw 5/16"-18x1-1/2"	32-117
31	2	Flat Washer 3/8", Stainless Steel	32-366
32	1	Retaining Ring, Clutch Release Shaft	49-103

Bill Of Materials for CCI #58-290 (2 of 2)

Item #	Qty.	Description	Part #
33	1	Retaining Ring, Trap Door, Counter Shaft (n/s)	49-110
34	1	Special Washer, Clutch Release Arm	21-775
35	1	Gasket, Trap Door	54-201
36	1	O-Ring, Filler Plug	54-381
37	1	Clutch Pushrod	56-007
38	1	Flathead Screw 5/16"-18x3/4", Chrome	59-214
39	4	Flat Washer 1/4" ID. x 7/16" OD., Chr.	93-537
40	4	Sockehead Screw 1/4"-20x1-1/8", Chr.	93-562
41	1	Filler Plug, Chrome	93-662
42	1	Kick Starter Trap Door, 4/5-Speed	93-869
43	1	Kicker Main Shaft, 4/5-Speed, Pre-installed	93-870
44	1	Thrust Washer, Main Shaft Bearing (n/s)	93-871
45	1	Nylock Nut 7/8"-18, Main Shaft	26-073
46	1	Clutch Pushrod Extension	93-891
47	1	Bracket, Battery Box / Starter	93-892
48	1	Clutch Release Shaft, Short	93-893
49	1	Clutch Release Arm, Chrome	93-894
50	1	Upper Bushing, Starter Cover (not shown)	93-985
51	1	Retaining Ring, Trap Door, Main Shaft (n/s)	93-896
52	1	Bearing, Trap Door, Main Shaft	93-897
53	4	Flat Washer 5/16", Chrome	93-898
54	1	Kicker Cover (25-947) w/Short Upper Bushing	93-899
55	1	Lower Bushing, Starter Cover (not shown)	93-970
56	1	Thick Washer 13/32"x11/16"x3/32"	93-972
57	1	Washer 13/32"x11/16"x1/16"	93-973
58	5	Washer 5/16", 0.10" Thick	93-983
59	5	5/16" Spacer, Kickstart Cover	93-984
60	2	Flathead Screw 1/4"-20x5/8" Long, Zinc	93-900
61	1	Nylock Nut 3/4"-16, Counter Shaft	93-510
62	5	Retaining Ring, Gears (not shown)	49-114
63	5	5/16" Lock Washer	25-174

RevTech®

High Performance by Custom Chrome

Five Speed in a Four Speed Case with Kicker

The Ultimate transmission for the retro look. Get the classic look of a four speed kicker and the performance benefit of a smooth shifting 5-speed. This transmission is a bolt-in proposition for virtually any electric-start or four speed Big Twin. It combines a heavy duty kicker assembly with the early five-speed end cover and clutch actuation lever with five speed shifting mechanism, gears and top cover in a four-speed sized case.

16100 Jacqueline Court, Morgan Hill, CA 95037-5598

CUSTOM CHROME® Instructions

Chrome RevTech® 4/5-Speed Kick Starter Kit Assembly CCI #58-290, 58-295

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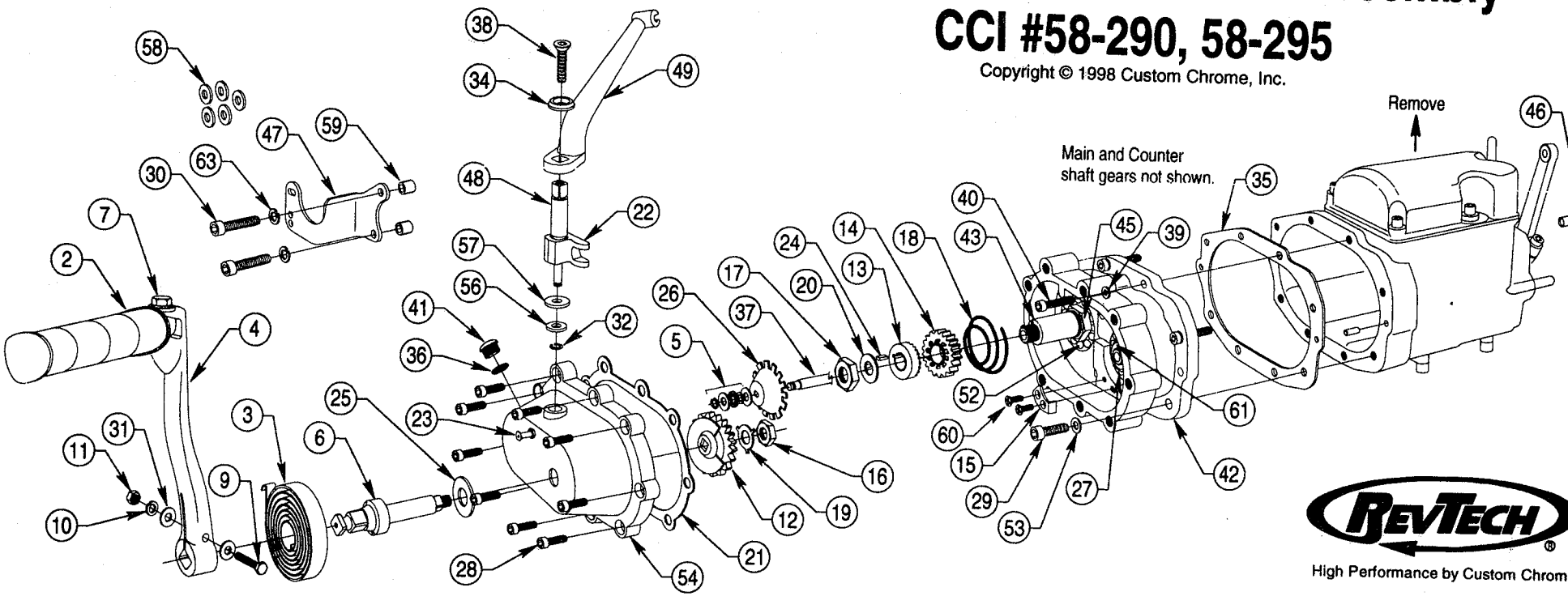

IMPORTANT NOTE: Use Loctite™ (CCI #35-007) onto the first three threads of all hardware, before the final assembly.

1. Use your proper OEM service manual and remove the existing shifter assembly and gear set with trap door from the transmission case.
2. **IMPORTANT: Note the order and position of each existing gear, thrust washer and retaining clip for reassemble.** Remove all gears, thrust washers, bearings and retaining clips from the main shaft and counter shaft.
3. Remove both existing shafts from the trap door. Set aside the main shaft and trap door, these items will be replaced with a new main shaft (longer) and your new kicker trap door.
4. **Note: The supplied main shaft is pre-installed into the kicker trap door.** Install your existing counter shaft with the existing spacer (beveled side down) into the kicker trap door using the supplied nylock nut (61).
5. Reassemble all gears onto main shaft and counter shaft **accordingly** using the existing thrust washers, bearings and the new supplied retaining rings. Refer to back page for gear assembly.
6. Install the complete gear set with trap door and gasket into transmission case using the supplied hardware.
7. Install the existing shift forks, shift rod and shift cam. Use your OEM service manual for adjusting the shift pawl, if needed. Before continuing, remove nut (45) from the main shaft and apply Loctite™ onto threads then securely tighten nut to 40-45 ft.-lbs.
8. Install kicker, crank/ clutch gear assembly in the following order. Place starter clutch spring (18), kick starter gear (14), starter clutch (13) with key (24) onto the protruding main shaft then secure this assembly with a lock washer (20) and nut (17). Apply Loctite™ onto threads then securely tighten nut to 22-28 ft.-lbs.
9. Slide the clutch push rod assembly (clutch push rod (37) with oil slinger (26) and bearings (5)) into the main shaft.
10. The kicker cover is pre-assembled except for the kick pedal spring and kick pedal arm. Slide the clutch push rod assembly out 2-3 inches then install the kicker cover with gasket using the supplie hardware. Slide the kick pedal spring (3) onto kicker shaft and attach spring end onto stud (23). Install the kick pedal arm assembly onto kicker shaft using the supplied hardware. Install the clutch release arm (49) onto the top of kicker cover using the supplied hardware and place the clutch push rod extension (46) into opposite side of main shaft. Tighten all hardware securely.